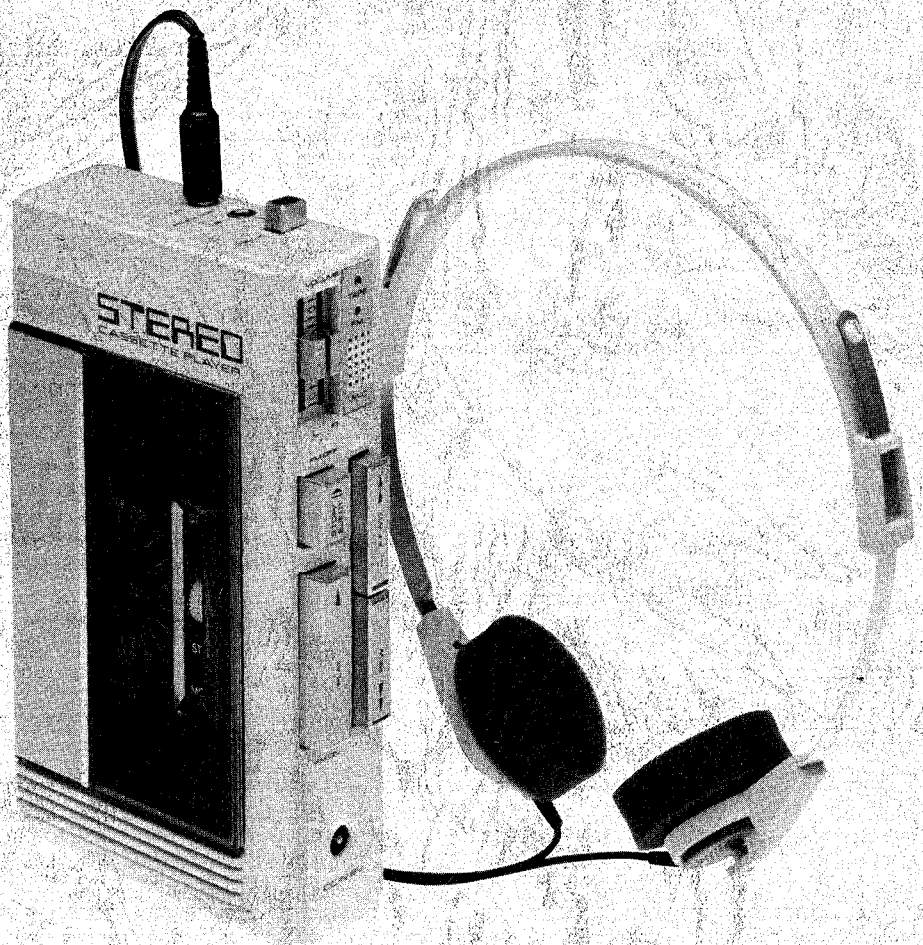
AKAI SERVICE MANUAL



STEREO CASSETTE PLAYER

MODEL **PM-01**

FM TUNER PACK

MODEL **FM-01**

STEREO CASSETTE PLAYER

MODEL PM-01

FM TUNER PACK

MODEL FM-01

TABLE OF CONTENTS

I. **SPECIFICATIONS** **2**
II. **MODEL PM-01 ADJUSTMENTS** **3**
1. TAPE SPEED ADJUSTMENT 3
2. HEAD AZIMUTH ADJUSTMENT 3
III. **MODEL FM-01 ADJUSTMENTS** **4**
IV. **COMPOSITION OF VARIOUS P.C BOARDS** **5**
1. AMP P.C BOARD (PM-01) 5
2. MIC AND PHONE P.C BOARD (PM-01) 5
3. VR P.C BOARD (PM-01) 5
4. FM TUNER PACK P.C BOARD (FM-01) 6
V. **PARTS LIST** **7**
1. RECOMMENDED SPARE PARTS 7
2. MECHA BLOCK 8
3. GROUP P.C BOARD BLOCK 9
4. ASSEMBLY BLOCK 10
5. FM TUNER PACK P.C BOARD 11
6. FM TUNER PACK ASSEMBLY BLOCK 11
INDEX 12
VI. **SCHEMATIC DIAGRAM** **13**
1. MODEL PM-01 13
2. MODEL FM-01 14

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATION

1. Model PM-01

SPECIFICATIONS

Model	PM-01 Cassette Player
Track System	4 Track 2 Channel Stereo System
Wow & Flutter	0.2% WRMS (JIS)
Frequency Response	31.5 Hz to 12.000 Hz
S/N ("A" network)	50 dB
Channel Separation ("A" network)	35 dB
Output Power	40 mW (per channel)
Power Requirements	DC 6V (AC adopter, 4 × AA or R6 size batteries)
Dimensions	92(W) × 159(H) × 34(D) mm (3.6 × 6.3 × 1.3) inches
Weight	470 grm (without batteries) (16.45 oz.)

STANDARD ACCESSORIES

Operator's Manual	1
Headphones	1
Carrying Case	1

2. Model FM-01

FM Tuner Pack	
Tuning Frequency	Range: 88 to 108 MHz
Usable Sensitivity	15 dBf (mono)
Harmonic Distortion (mono/stereo)	0.7%/1% (1 kHz)
S/N (mono/stereo)	50 dB/40 dB (1 kHz)
Selectivity	40 dB
Stereo Separation	33 dB
Frequency Response	40 Hz to 12,000 Hz
Operating Power	DC 6V
Dimensions	same as cassette tape
Weight	50 grm. (1.75 oz.)

*** For improvement purpose, specifications and design are subject to change without notice.**

II. MODEL PM-01 ADJUSTMENTS

1. Tape Speed Adjustment

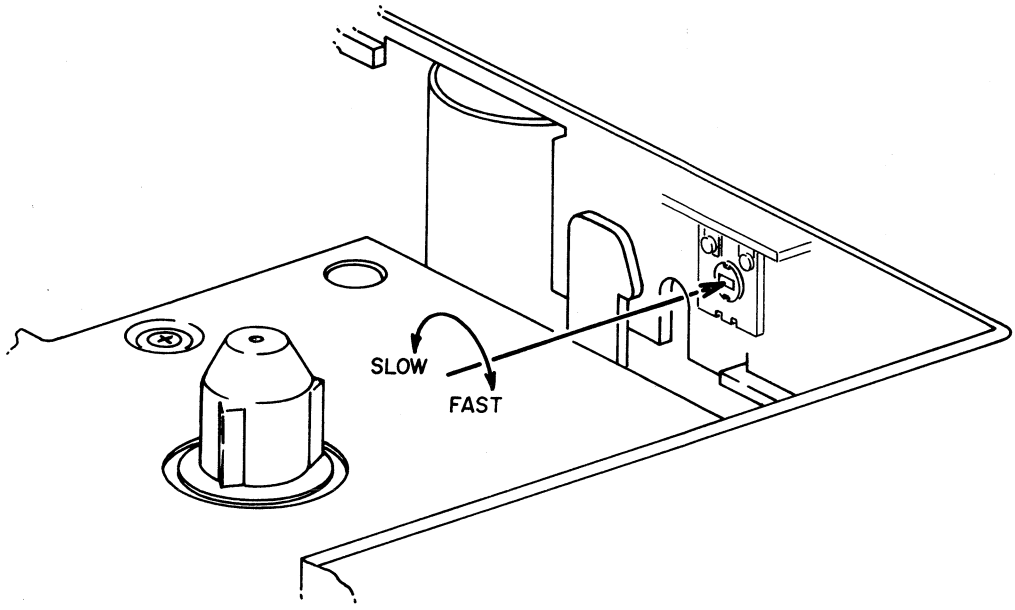


Fig. 1 Tape Speed Adj.

2. Head Azimuth Adjustment

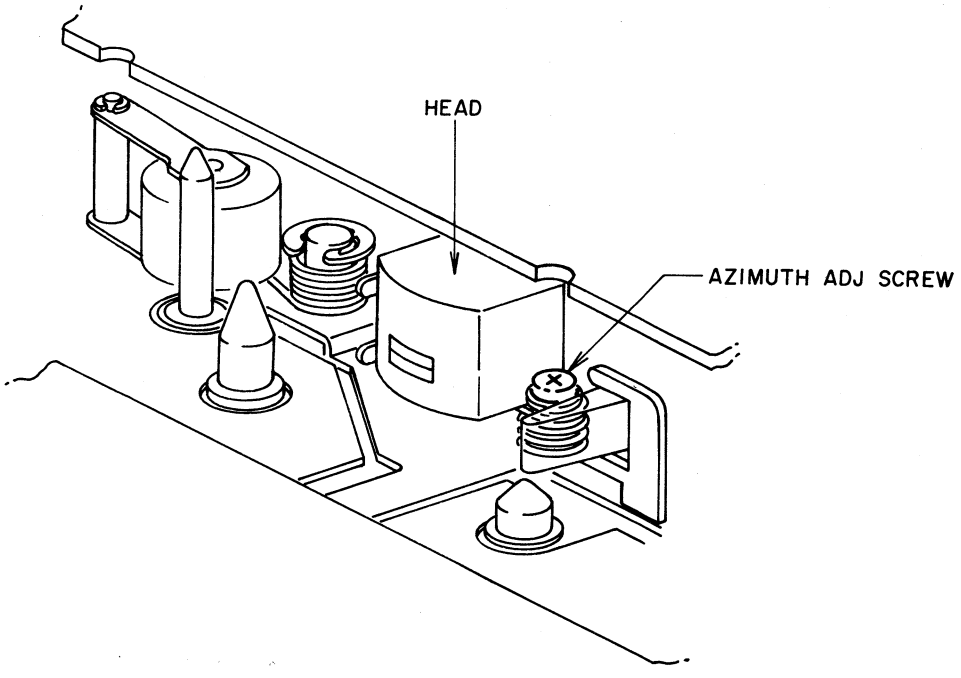


Fig. 2 Head Azimuth Adj.

III. MODEL FM-01 ADJUSTMENTS

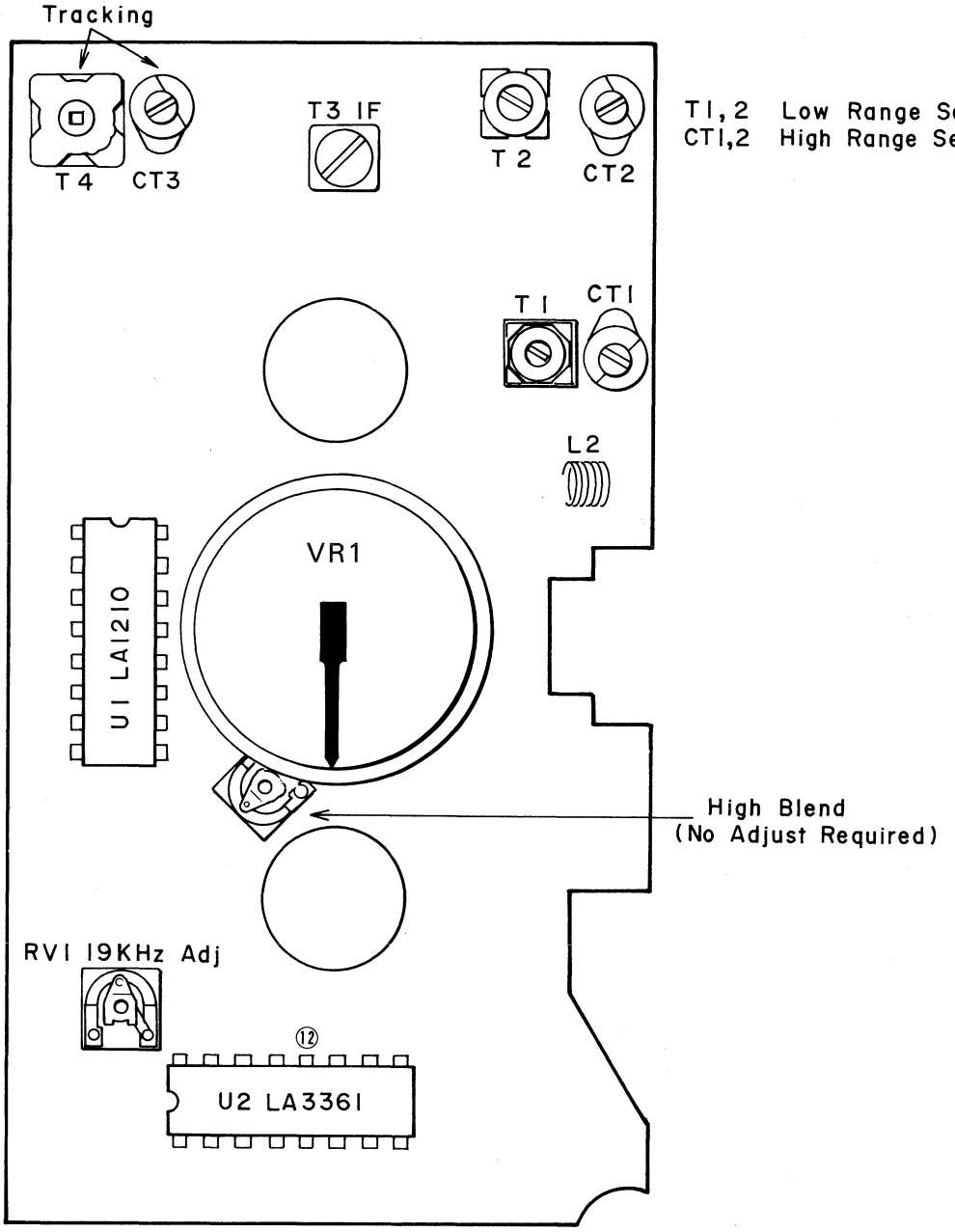
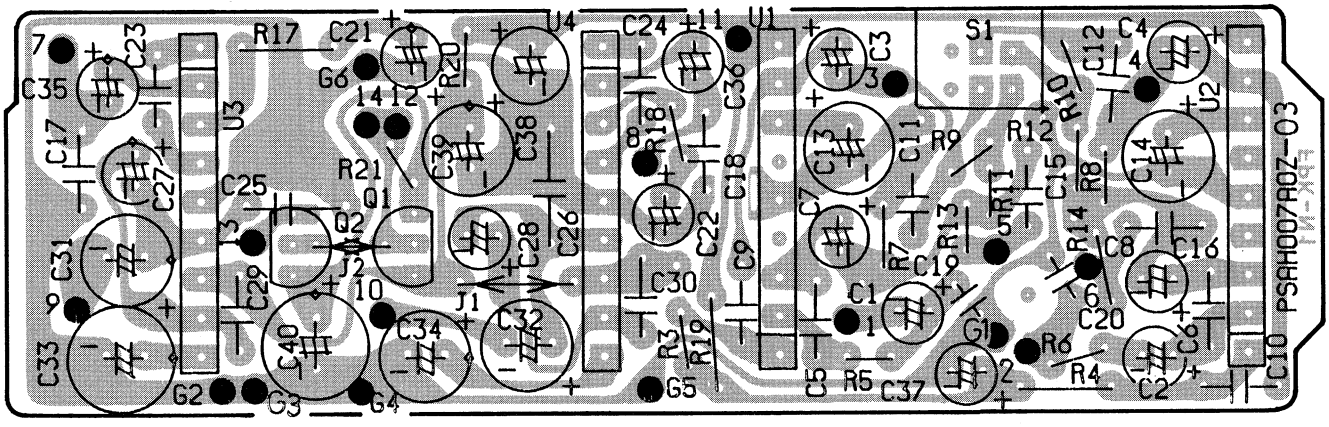


Fig. 3 FM-01

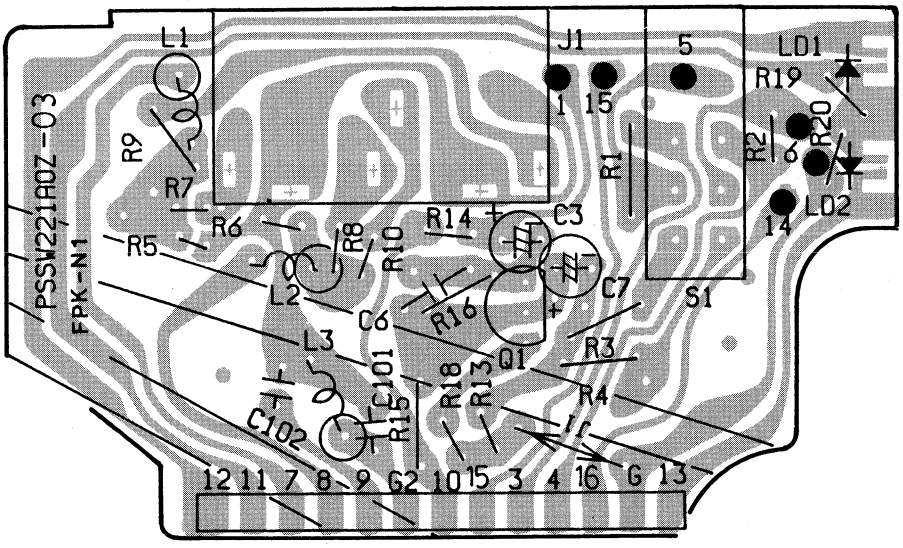
STEP	ADJUSTMENT ITEM	ADJUSTMENT POINT	RESULTS	REMARKS
1	IF Coil	T3	Maximum Noise Level	Tunes only noise.
2	Distortion Factor	T5	Minimum Distortion Factor Maximum Output	98 MHz 60 dB ANT (J1 ①) input.
3	Low Range Tracking	T4	Maximum Output	87.35 MHz input VR-1 at Maximum Position
4	High Range Tracking	CT-3	Maximum Output	109.0 MHz input VR-1 at minimum Position
5	Sensitivity	T1, 2 at 90 MHz CT1, 2 at 106.0 MHz	Maximum Output	
6	PLL IC Free Running Freq.	RV-1	19 kHz ±10 Hz	Connect frequency counter between U-2 ⑫ and ground.
7	For best results, repeat steps 1 ~ 6 two or three times.			

IV. COMPOSITION OF VARIOUS P.C BOARDS

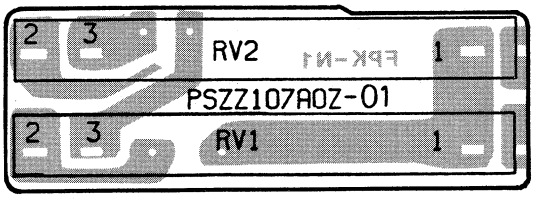
1. AMP P.C Board (PM-01)



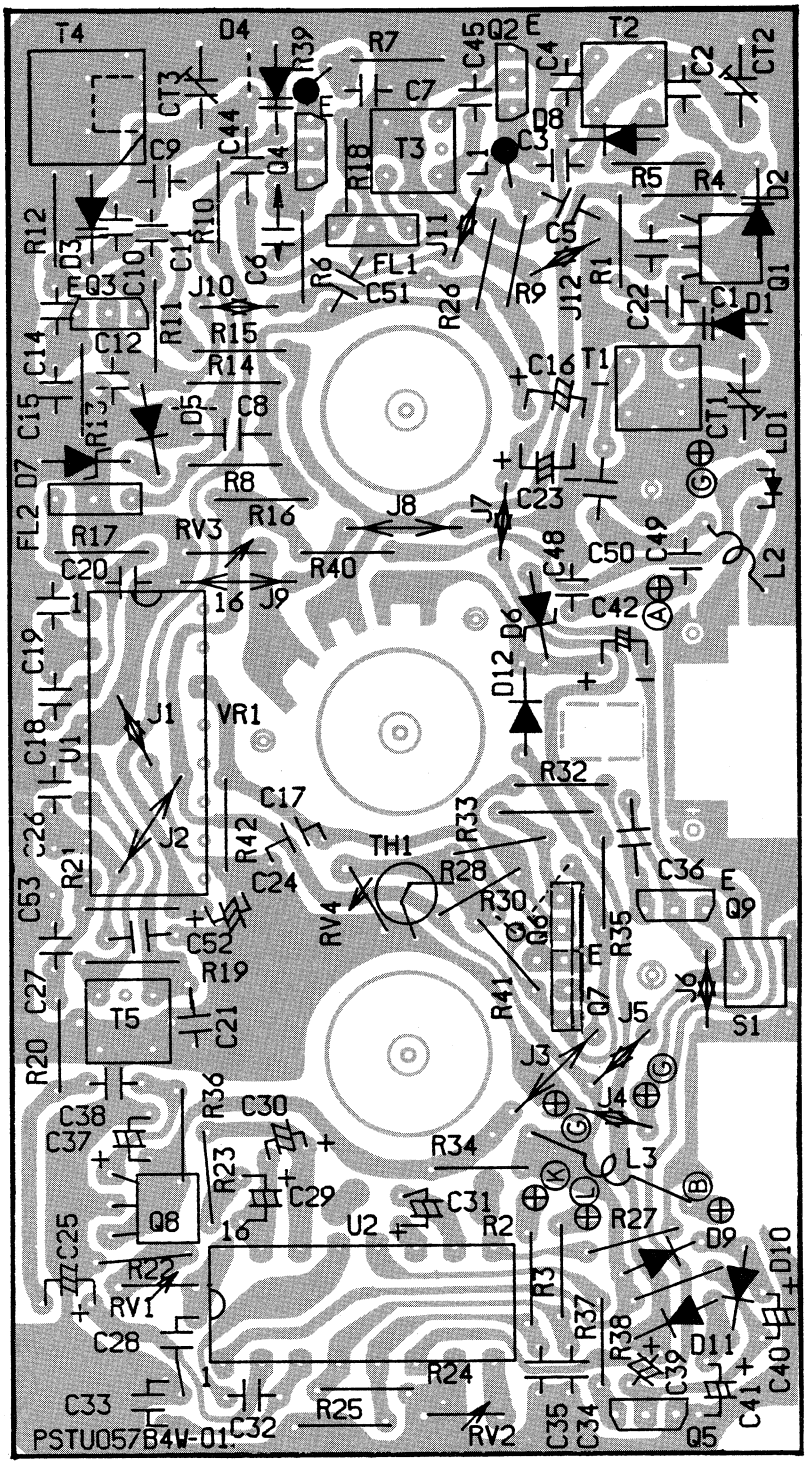
2. MIC and Phone P.C Board (PM-01)



3. VR P.C Board (PM-01)



4. FM Tuner Pack P.C Board (FM-01)



V. PARTS LIST

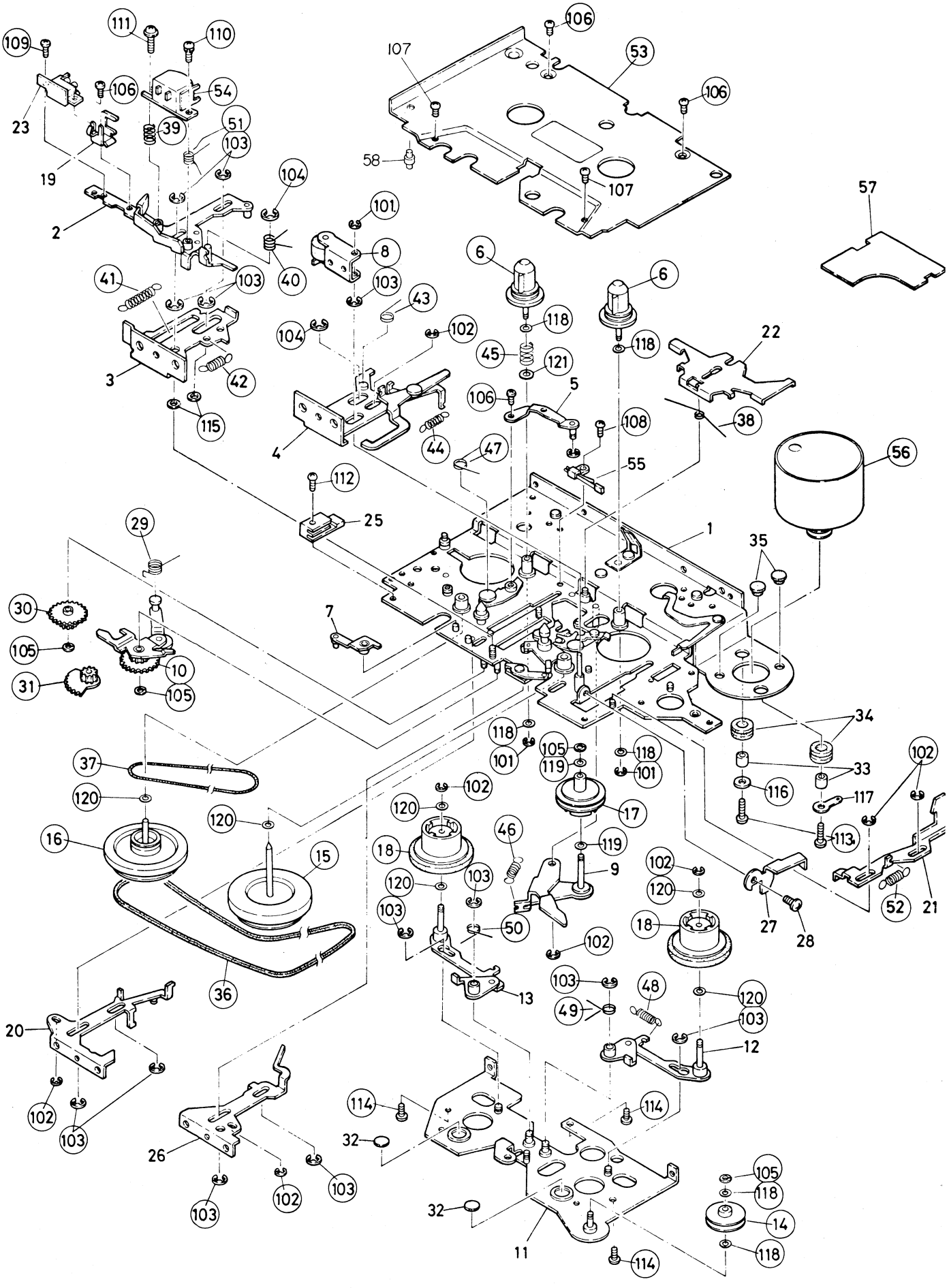
1. RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

Ref. No.	Parts No.	Description
1-1	BH705902	HEAD ASSY
1-2	BM706196	MOTOR
1-3	BR705895	REEL TABLE (A) ASSY
1-4	BZ705896	PINCH ROLLER ARM ASSY
1-5	ED705890	D LED TLR-206
1-6	ED315498	D LED TLR124 RED
1-7	ED706055	D SILICON MA150
1-8	ED706054	D VARACTOR ITT310
1-9	ED706056	D ZENER UZ2B-2
1-10	ED706057	D ZENER UZ68B
1-11	ED706058	THERMISTER TD5-C330D1
1-12	EI706059	IC LA1210
1-13	EI705884	IC LA3210
1-14	EI706060	IC LA3361
1-15	EI705885	IC LA4140
1-16	ER706053	FILTER CE
1-17	ES705889	SW MICRO
1-18	ES705893	SW PUSH
1-19	ES705887	SW SLIDE
1-20	ES706071	SW SLIDE
1-21	ES705845	VR SLIDE
1-22	ET706062	TR 2SA1048 O, RY
1-23	ET554725	TR 2SC1318 R, Q
1-24	ET706064	TR 2SC2458 Y
1-25	ET706063	TR 2SC668 D, E
1-26	ET342696	TR 2SC828 Q, R
1-27	ET618873	TR 2SC930 E, F
1-28	ET706065	TR 2SK107 3, 4
1-29	ET706066	TR 2SK168
1-30	EV706070	VR ROTARY 104
1-31	MB705909	BELT 1MM × 38
1-32	MB705908	BELT 87.5MM

When ordering parts, please quote Parts Number, Description and Model Number.

2. MECHA BLOCK



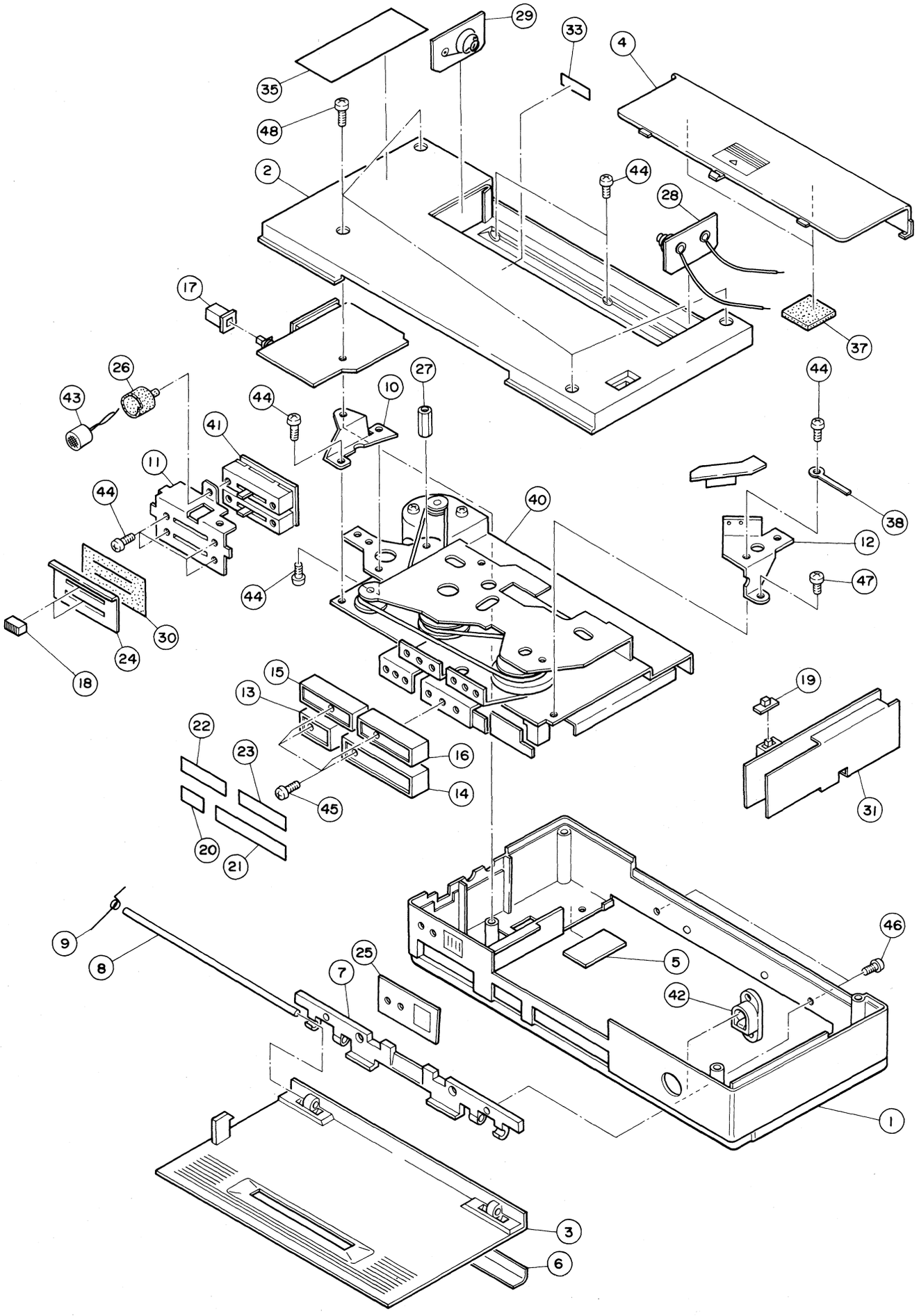
MECHA BLOCK

Ref. No.	Parts No.	Description
2-6	BR705895	REEL TABLE (A) ASSY
2-8	BZ705896	PINCH ROLLER ARM ASSY
2-10	MZ705897	ASO GEAR BASE
2-14	MR705904	PULLEY CENTER
2-15	MI705900	FLYWHEEL (A)
2-16	MI705901	FLYWHEEL (B)
2-17	MR705899	PULLEY TU CLUTCH
2-18	MR705898	PULLEY CLUTCH
2-29	ZG705905	SP ASO GEAR
2-30	MZ705906	GEAR ASO (3)
2-31	MZ705907	GEAR ASO (4)
2-36	MB705908	BELT 87.5MM
2-37	MB705909	BELT 1MM × 38
2-38	ZG705910	SP BRAKE LEVER
2-39	ZG705911	SP HEAD ADJUST
2-40	ZG705912	SP PINCH LEVER
2-41	ZG705913	SP HEAD BASE
2-42	ZG705914	SP PLAY LEVER
2-43	ZG705915	SP EJECT LEVER
2-44	ZG705916	SP STOP LEVER
2-45	ZG705917	SP REEL
2-46	ZG705918	SP TU CLUTCH
2-47	ZG705919	SP REC LEVER
2-48	ZG705920	SP FR CLUTCH
2-49	ZG705921	SP FF LEVER
2-50	ZG705922	SP REW LEVER
2-51	ZG705923	SP ASO LEVER
2-52	ZG705924	SP LOCK LEVER
2-53	BZ705925	COVER MECHA BLK
2-54	BH705902	HEAD ASSY
2-56	BM706196	MOTOR
2-101	ZW705927	RING 1.2
2-102	ZW705928	RING 1.5
2-103	ZW705929	RING 2.0
2-104	ZW705930	RING 2.5
2-105	ES705931	SW REEL
2-106	ZS705932	PAN17 × 02 × STL BNI
2-108	ZS705933	PAN17 × 03STL CMT
2-109	ZS303936	PAN20 × 02STL CMT
2-110	ZS705935	PAN2 × 3STL CMT PW, SW
2-111	ZS705937	PAN2 × 3STL CMT PW, EL
2-112	ZS705938	PAN20 × 08STL BNI
2-113	ZS460440	PAN20 × 04STL CMT
2-114	ZS705940	FFL20 × 30STL BNI SPL
2-115	ZS705941	PW25X***X25
2-116	ZS705942	PW23 × 060 × 140
2-118	ZS705943	PW16 × 030 × 025
2-119	ZS705944	PW16 × 030 × 013
2-120	ZS705945	PW21 × 040 × 025
2-121	ZS705946	PW41 × 058 × 010

3. GROUP P.C BOARD BLOCK

Ref. No.	Parts No.	Description
3-1	EA705844	PC GROUP BLK (INCLUDING AMP PCB, MIC & PHONE PCB, VR PCB, SW PCB)
		AMP PC BLK
3-U1, 2	EI705884	IC LA3210
3-U2, 3	EI705885	IC LA4140
3-Q1, 2	ET554725	TR 2SC1318 R, Q
3-S1	ES705887	SW SLIDE
		MIC & PHONE PC BLK
3-Q1	ET342696	TR 2SC828 Q, R
3-LED1, 2	ED705890	D LED TLR-206
3-S1	ES705893	SW PUSH
3-J1	EJ705894	PHONE J
		SW PC BLK
3-S1	ES705889	SW MICRO (TAPE-TUNER)

4. ASSEMBLY BLOCK



ASSEMBLY BLOCK

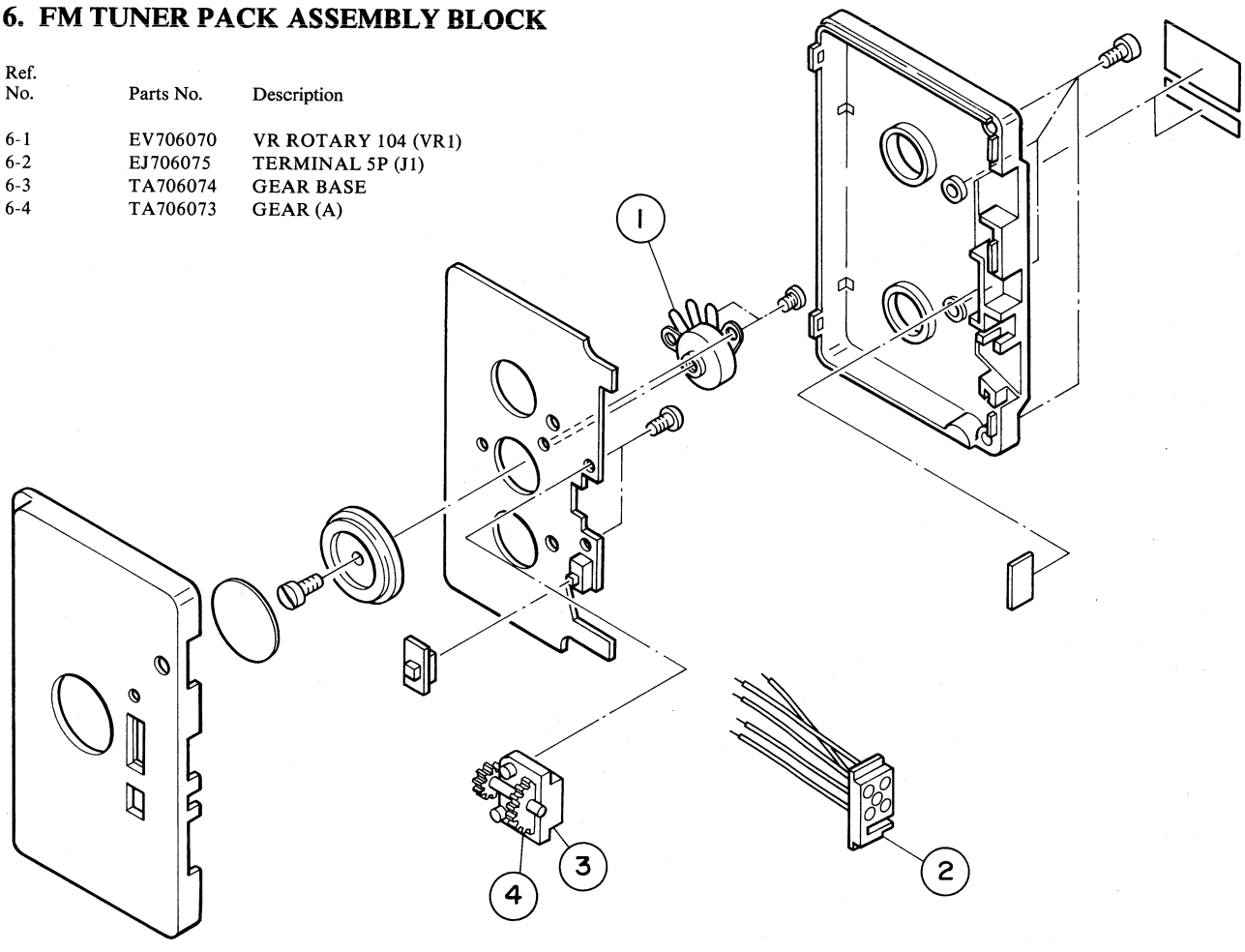
Ref. No.	Parts No.	Description
4-1	BZ705860	NAME PLATE ASSY (INCLUDING 5)
4-2	SP705864	BOTTOM COVER
4-3	BD706049	LID CASSETTE ASSY (INCLUDING 6)
4-4	BZ705866	LID BATTERY ASSY (INCLUDING 37)
4-7	MZ705867	HINGE
4-9	ZG705863	SP LID
4-13	SB705872	BUTTON STOP
4-14	SB705873	BUTTON PLAY
4-15	SB705874	BUTTON FF
4-16	SB705875	BUTTON REW
4-17	SB705876	BUTTON TALK
4-18	SK705871	KNOB VR
4-19	SK705869	KNOB TONE
4-20	MZ705856	PLATE STOP
4-21	TK705861	PLATE PLAY
4-22	TK705858	PLATE FF
4-23	TK705859	PLATE REW
4-28	BZ705849	TERMINAL (A) ASSY
4-29	BZ705850	TERMINAL (B) ASSY
4-40	BZ705843	MECHA CASSETTE DECK
4-41	ES705845	VR SLIDE
4-42	EJ705847	JACK DC
4-43	MZ705848	MICROPHONE
4-44	ZS705851	BID20 × 03STL CMT
4-45	ZS705852	BID20 × 06STL CMT
4-46	ZS705853	T2BID20 × 06STL BNI
4-47	ZS705854	T1PAN26 × 08STL BNI
4-48	ZS705855	T1PAN26 × 12STL BNI
4-49x	EJ705883	PLUG

5. FM TUNER PACK P.C BOARD

Ref. No.	Parts No.	Description
5-U1	EI706059	IC LA1210
5-U2	EI706060	IC LA3361
5-Q1	ET706066	TR 2SK168
5-Q2, 3	ET706063	TR 2SC668 D, E
5-Q4	ET618873	TR 2SC930 E, F
5-Q5 to 7	ET706064	TR 2SC2458 Y
5-Q8	ET706065	TR 2SK107 3, 4
5-Q9	ET706062	TR2SA1048 O, RY
5-D1 to 4	ED706054	D VARACTOR ITT310
5-D5	ED706055	D SILICON MA150
5-D6	ED706057	D ZENER UZ68B
5-D7	ED706056	D ZENER UZ2B-2
5-D8 to 12	ED706055	D SILICON MA150
5-LD1	ED315498	D LED TLR124 RED
5-TH1	ED706058	THERMISTER TD5-C330D1
5-FL1, 2	ER706053	FILTER CE
5-VR1	EV706068	R S-FIX 103
5-VR2	EV706067	R S-FIX 102
5-VR3, 4	EV706069	R S-FIX 503
5-CT1, 2	EC706052	C S-FIX H
5-CT3	EC706194	C S-FIX H
5-S1	ES706071	SW SLIDE

6. FM TUNER PACK ASSEMBLY BLOCK

Ref. No.	Parts No.	Description
6-1	EV706070	VR ROTARY 104 (VR1)
6-2	EJ706075	TERMINAL 5P (J1)
6-3	TA706074	GEAR BASE
6-4	TA706073	GEAR (A)



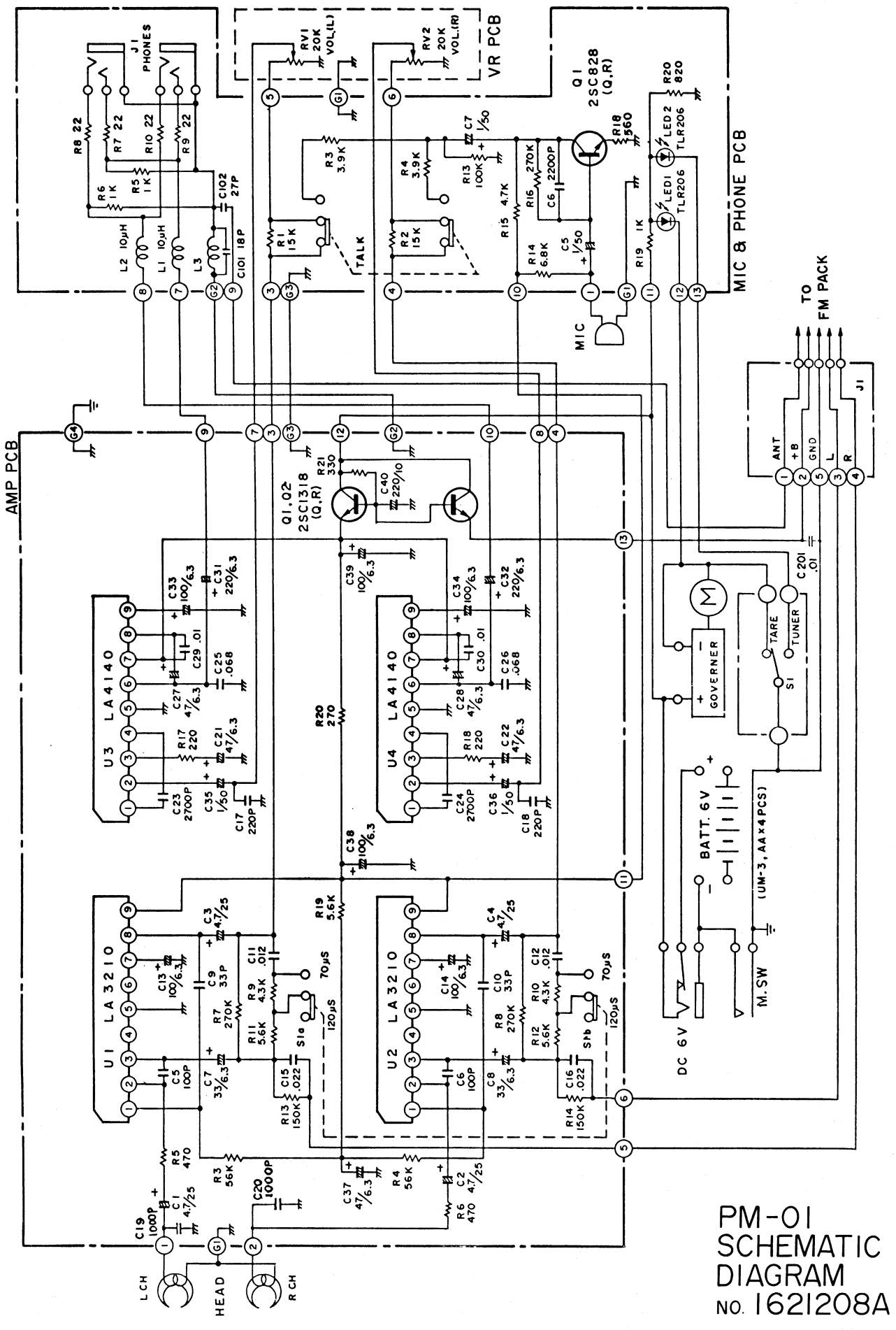
When ordering parts, please quote Parts Number, Description and Model Number.

INDEX

Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
BD706049	4-3	ZG705913	2-41				
BH705902	2-54	ZG705914	2-42				
BM706196	2-56	ZG705915	2-43				
BR705895	2-6	ZG705916	2-44				
BZ705843	4-40	ZG705917	2-45				
BZ705849	4-28	ZG705918	2-46				
BZ705850	4-29	ZG705919	2-47				
BZ705860	4-1	ZG705920	2-48				
BZ705866	4-4	ZG705921	2-49				
BZ705896	2-8	ZG705922	2-50				
BZ705925	2-53	ZG705923	2-51				
EA705844	3-1	ZG705924	2-52				
EC706052	5-CT1, 2	ZS303936	2-109				
EC706194	5-CT3	ZS460440	2-113				
ED315498	5-LD1	ZS705851	4-44				
ED705890	3-LED1, 2	ZS705852	4-45				
ED706054	5-D1 to 4	ZS705853	4-46				
ED706055	5-D5	ZS705854	4-47				
ED706055	5-D8 to 12	ZS705855	4-48				
ED706056	5-D7	ZS705932	2-106				
ED706057	5-D6	ZS705933	2-108				
ED706058	5-TH1	ZS705935	2-110				
EI705884	3-U1, 2	ZS705937	2-111				
EI705885	3-U2, 3	ZS705938	2-112				
EI706059	5-U1	ZS705940	2-114				
EI706060	5-U2	ZS705941	2-115				
EJ705847	4-42	ZS705942	2-116				
EJ705883	4-49x	ZS705943	2-118				
EJ705894	3-J1	ZS705944	2-119				
EJ706075	6-2	ZS705945	2-120				
ER706053	5-FL1, 2	ZS705946	2-121				
ES705845	4-41	ZW705927	2-101				
ES705887	3-S1	ZW705928	2-102				
ES705889	3-S1	ZW705929	2-103				
ES705893	3-S1	ZW705930	2-104				
ES705931	2-105						
ES706071	5-S1						
ET342696	3-Q1						
ET554725	3-Q1, 2						
ET618873	5-Q4						
ET706062	5-Q9						
ET706063	5-Q2, 3						
ET706064	5-Q5 to 7						
ET706065	5-Q8						
ET706066	5-Q1						
EV706067	5-VR2						
EV706068	5-VR1						
EV706069	5-VR3, 4						
EV706070	6-1						
MB705908	2-36						
MB705909	2-37						
MI705900	2-15						
MI705901	2-16						
MR705898	2-18						
MR705899	2-17						
MR705904	2-14						
MZ705848	4-43						
MZ705856	4-20						
MZ705867	4-7						
MZ705897	2-10						
MZ705906	2-30						
MZ705907	2-31						
SB705872	4-13						
SB705873	4-14						
SB705874	4-15						
SB705875	4-16						
SB705876	4-17						
SK705869	4-19						
SK705871	4-18						
SP705864	4-2						
TA706073	6-4						
TA706074	6-3						
TK705858	4-22						
TK705859	4-23						
TK705861	4-21						
ZG705863	4-9						
ZG705905	2-29						
ZG705910	2-38						
ZG705911	2-39						
ZG705912	2-40						

VI. SCHEMATIC DIAGRAM

1. Model PM-01



2. Model FM-01